REMARKS

Status of the Claims

Claims 1-11 are pending in the present application. Claims 10 and 11 are withdrawn from consideration as directed to a non-elected invention. Claim 1 and withdrawn claim 10 are amended. Support for amended claims 1 and 10 is found throughout the application as originally filed including on page 24, lines 6-8 and Tables 3A, 3B and 5. No new matter is added by way of this amendment. Reconsideration is respectfully requested.

Request for Rejoinder

Applicants request that at least claim 10 be rejoined with claims 1-9. Applicants submit that at least claims 1-10 relate to a single general inventive concept and satisfy the unity of invention requirement since the claims include a technical feature that makes a contribution over the art. In particular, the claims describe an *in vitro* assembled Mu transposition complex that comprises (i) MuA transposases and (ii) a transposon segment that comprises a pair of Mu end sequences recognized and bound by MuA transposase and an insert sequence between said Mu end sequences, wherein the transposon segment is integrated by transposition into the cellular nucleic acid of said target cell. In view of this special technical feature, withdrawal of the restriction requirement and rejoinder of the claims is respectfully requested.

Claim Objections

The Examiner has objected to claim 5 because the claim allegedly does not end in a period, *see* Office Action, page 2. Applicants respectfully traverse.

Applicants respectfully submit that claim 5 ends in a period. Applicants note that the claims were amended pursuant to Article 34 of the PCT. Copies of the amended claims are found on the Patent Application Information Retrieval system (PAIR) in a May 7, 2007, submission, *see* the tag labeled "Applicant Arguments/Remarks Made in an Amendment." Accordingly, Applicants submit that it is not necessary to further amend claim 5. Reconsideration and withdrawal of this objection are respectfully requested.

Issues under 35 U.S.C. § 102(b)

Claims 1, 3-5, and 7-9 are rejected under 35 U.S.C. § 102 (b) as allegedly anticipated by Schagen *et al.*, *Nucleic Acids Research*, 2000, 28:1-7, ("Schagen"), *see* Office Action, pages 2-4. Applicants respectfully traverse.

Applicants note that the Examiner states that the claims specify a "eukaryotic target cell", *see* Office Action, page 3. Applicants respectfully note that the claims specify a "mammalian target cell." The Examiner further states that claim 5 specifies "human, animal, plant, fungi or yeast", *see* Office Action, page 3. Applicants respectfully note that claim 5 only specifies "human."

In regard to Schagen, the Examiner states that this reference describes *in vivo* transposition in mammalian cells by co-transfection of MuA and MuB expression vectors with a donor construct, which contain a miniMu transposon carrying a Hygromycin-resistance marker (HygR). The Examiner states that Schagen describes that expression of MuA and MuB increases the integration of miniMu vectors in mammalian cells, but admits that this increase is not the result of *bona fide* Mu-induced transposition. Nevertheless, the Examiner believes that Schagen anticipates the present claims because the instant claims do not call for actual transposition.

In an effort to expedite prosecution, claim 1 is amended to specify "wherein the transposon segment is integrated by transposition into the cellular nucleic acid of said target cell", in lieu of "under conditions that allow integration of the transposon segment into the cellular nucleic acid." As acknowledged by the Examiner, Schagen does not describe *bona fide* Mu-induced transposition. Applicants submit that integration of the transposon segment into the cellular nucleic acid of the target cell, as described in the amended claims, is mediated by *bona fide* Mu-induced transposition, since the integrated sequences in the target chromosome comprise intact transposon ends with the 5 bp duplication of the target site at both sides of the integrated transposon sequences, *see* the Tables in the originally filed application. This 5 bp duplication of the host sequence around the integrated sequence is a unique sign of Mu transposition.

In view of the foregoing, amended claim 1 and the dependent claims, which incorporate the elements of amended claim 1, are not anticipated by Schagen. Withdrawal of the rejection is respectfully requested.

Issues under 35 U.S.C. § 103 (a)

Claims 1, 2, and 5 are rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Schagen in view of U.S. Publication No. 2005/0071895 to Zhang, *see* Office Action, pages 4-6. Applicants respectfully traverse.

As described above, independent claim 1 is amended to specify "wherein the transposon segment is integrated by transposition into the cellular nucleic acid of said target cell." Accordingly, the claims require actual transposition. As noted previously, Schagen does not describe *bona fide* Mu-induced transposition. Zhang fails to remedy this deficiency. Accordingly, none of the cited references, either alone or in combination, teach or suggest all of the elements of amended independent claim 1.

In view of the foregoing, amended claim 1 and the dependent claims, which incorporate the elements of amended claim 1, are not obvious in view of the cited references. Withdrawal of the rejection is respectfully requested.

Outstanding Matters

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Linda T. Parker, PhD, Registration No. 46,046, at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

CONCLUSION

In view of the above amendment and remarks, Applicants believe the pending application is in condition for allowance.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

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